

CLAIMS:

1. A method for processing data received from an input device through an interface, comprising:

- (a) examining one or more bytes of a data packet received by a port driver;
- (b) detecting the presence within the data packet of data not recognized by the port driver;
- (c) storing the unrecognized data from the packet;
- (d) replacing the portion of the packet containing the unrecognized data with a substitute value;
- (e) receiving a data structure created from the data packet, the data structure containing a value corresponding to the substitute value;
- (f) retrieving the stored data upon detecting the data structure value corresponding to the substitute value; and
- (g) providing input data to at least one application program based on the retrieved data.

2. The method of claim 1, wherein said examining one or more bytes comprises examining one or more bytes of a PS/2 data packet received by the port driver.

3. The method of claim 2, wherein the unrecognized data comprises input data inserted into a portion of a PS/2 data packet reserved for a specific data type, and wherein the port driver does not recognize the inserted data as being distinct from the specific data type.

4. The method of claim 2, wherein steps (a) through (g) are carried out by a filter driver in data communication with the port driver.

5. The method of claim 4, wherein:

- the filter driver is in data communication with a third driver,
- the third driver is in data communication with the port driver,

the third driver receives data from the PS/2 packet and the substitute value,
and

the third driver provides the data structure to the filter driver.

6. The method of claim 2, wherein step (a) comprises examining one or more bytes containing a flag indicating the presence within the packet of unrecognized data.

7. The method of claim 2, wherein the unrecognized data comprises horizontal scrolling data from a computer mouse.

8. The method of claim 7, further comprising repeating steps (a) through (g) for a second PS/2 data packet containing a second type of unrecognized data, wherein the second type of unrecognized data comprises high resolution vertical scroll data.

9. The method of claim 8, wherein:

the filter driver is in data communication with a third driver,

the third driver is in data communication with the port driver,

the third driver receives data from the PS/2 packets and the substitute values,

the third driver provides the data structures to the filter driver,

performance of step (g) with regard to the high resolution vertical scroll data comprises insertion into the data structure of a value based upon the high resolution vertical scroll data, and

performance of step (g) with regard to the horizontal scroll data comprises providing to an application program, independent of the data structure, a value based upon the horizontal scroll data.

10. The method of claim 7, wherein step (g) comprises providing horizontal scroll data to a first application program which provides horizontal scroll information to a second application program.

11. A computer-readable medium having stored thereon data instructions which, when executed by a processor, cause the processor to perform steps comprising:

- (a) examining one or more bytes of a data packet received by a port driver;
- (b) detecting the presence within the data packet of data not recognized by the port driver;
- (c) storing the unrecognized data from the packet;
- (d) replacing the portion of the packet containing the unrecognized data with a substitute value;
- (e) receiving a data structure created from the data packet, the data structure containing a value corresponding to the substitute value;
- (f) retrieving the stored data upon detecting the data structure value corresponding to the substitute value; and
- (g) providing input data to at least one application program based on the retrieved data.

12. The computer-readable medium of claim 11, wherein said examining one or more bytes comprises examining one or more bytes of a PS/2 data packet received by the port driver.

13. The computer-readable medium of claim 12, wherein the unrecognized data comprises input data inserted into a portion of a PS/2 data packet reserved for a specific data type, and wherein the port driver does not recognize the inserted data as being distinct from the specific data type.

14. The computer-readable medium of claim 12, wherein steps (a) through (g) are carried out by a filter driver in data communication with the port driver.

15. The computer-readable medium of claim 14, wherein:
the filter driver is in data communication with a third driver,
the third driver is in data communication with the port driver,

the third driver receives data from the PS/2 packet and the substitute value,
and

the third driver provides the data structure to the filter driver.

16. The computer-readable medium of claim 12, wherein step (a) comprises examining one or more bytes containing a flag indicating the presence within the packet of unrecognized data.

17. The computer-readable medium of claim 12, wherein the unrecognized data comprises horizontal scrolling data from a computer mouse.

18. The computer-readable medium of claim 17, comprising additional instructions which, when executed by a processor, cause the processor to perform additional steps comprising repeating steps (a) through (g) for a second PS/2 data packet containing a second type of unrecognized data, wherein the second type of unrecognized data comprises high resolution vertical scroll data.

19. The computer-readable medium of claim 18, wherein:

the filter driver is in data communication with a third driver,

the third driver is in data communication with the port driver,

the third driver receives data from the PS/2 packets and the substitute values,

the third driver provides the data structures to the filter driver,

performance of step (g) with regard to the high resolution vertical scroll data comprises insertion into the data structure of a value based upon the high resolution vertical scroll data, and

performance of step (g) with regard to the horizontal scroll data comprises providing to an application program, independent of the data structure, a value based upon the horizontal scroll data.

20. The computer-readable medium of claim 17, wherein step (g) comprises providing horizontal scroll data to a first application program which provides horizontal scroll information to a second application program.

21. A computer input device, comprising:

an input control for receiving a first kind of user input, the first kind of user input having an associated data type not recognized by a port driver executing upon a computer;

a controller communicably coupled to the input control; and

a memory having stored thereon instructions which, when executed by the controller, cause the controller to perform steps comprising:

receiving data representing a user input of the first kind,

inserting the received data into a portion of a data packet reserved for a specific type of data distinct from the data type associated with the first kind of user input, and

transmitting the data packet to the port driver.

22. The computer input device of claim 21, wherein:

the first kind of user input has an associated data type not recognized by a PS/2 port driver executing upon the computer,

said inserting the received data comprises inserting the received data into a portion of a PS/2 data packet, and

said transmitting comprises transmitting the PS/2 data packet to the PS/2 port driver.

23. The computer input device of claim 22, further comprising:

a wireless user-operated portion for receiving user input; and

a transceiver portion in wireless communication with the user-operated portion and in communication with the computer, wherein the controller is located in the transceiver portion.

24. The computer input device of claim 22, wherein:
the user input comprises horizontal scroll input, and
inserting the received data into a portion of a PS/2 data packet comprises inserting horizontal scroll data into a byte of a PS/2 packet reserved for data other than horizontal scroll data.

25. The computer input device of claim 22, comprising a second input control for receiving a second kind of user input, the second kind of user input having an associated data type not recognized by the PS/2 port driver, wherein the memory has stored thereon additional instructions which, when executed by the controller, cause the controller to perform steps comprising:

subsequently receiving data representing a user input of the second kind,
inserting the subsequently received data into the portion of a second PS/2 data packet reserved for the specific type of data, the specific type of data also being distinct from the data type associated with the second kind of user input, and
transmitting the second PS/2 data packet to the PS/2 port driver.

26. The computer input device of claim 25, wherein the memory has stored thereon additional instructions which, when executed by the controller, cause the controller to perform steps comprising:

inserting a first type of flag into a PS/2 data packet to indicate the presence of data associated with the first kind of user input, and
inserting a second type of flag into a PS/2 data packet to indicate the presence of data associated with the second kind of user input.

27. The computer input device of claim 22, comprising a second input control for receiving a second kind of user input, the second kind of user input having an associated data type not recognized by the PS/2 port driver, wherein the memory has stored thereon additional instructions which, when executed by the controller, cause the controller to perform steps comprising:

inserting a first type of flag into PS/2 data packets to indicate the presence of data associated with the first kind of user input,

inserting a second type of flag into PS/2 data packets to indicate the presence of data associated with the second kind of user input

subsequently receiving data representing a user input of the second kind,
inserting the subsequently received data into a second PS/2 data packet, and
transmitting the second PS/2 data packet to the PS/2 port driver.